

ABSTRACT OF THE DISCLOSURE

A scheme for deforming a sheet of material is provided. In accordance with one embodiment of the present invention, an apparatus for deforming a sheet of material is provided.

5 The apparatus comprises a die portion, an electromagnetic actuator, and a conductive frame. The die portion defines a profiled surface. The electromagnetic actuator is arranged opposite the profiled surface of the die portion. The conductive frame is configured to (i) secure the sheet of material in electrical contact with the conductive frame in a position between the electromagnetic actuator and the profiled die surface, (ii) permit deformation of the sheet of material against the
10 profiled die surface upon activation of the electromagnetic actuator, and (iii) define a return path for eddy currents induced in the sheet of material upon activation of the electromagnetic actuator.